



Writing Academic Paper: from draft to revision

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Outline

- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- Revision and response to reviewers
- Ethical Issues
- Conclusion: what leads to ACCEPTANCE



Pressure of publishing more

High submissions + Low quality

STRESS for editors and reviewers...

Editors and reviewers are the **most precious resource** of a journal!

- Editors and reviewers are practicing scientists, even leaders in their fields. They are **not professional** journal staff – they do journal work **on top of** their own research, writing and teaching.
- They are busy people who work for journals **to contribute to science**.
- Editors may receive a small payment, but reviewers are **UNPAID**.
- Every manuscript takes up their precious time!

Nowadays they are working **even harder!**





An international editor says...

“The following problems appear **much too frequently**”

- Submission of papers which are clearly out of scope;
- Failure to format the paper according to the Guide for Authors;
- Inappropriate (or no) suggested reviewers;
- Inadequate response to reviewers;
- Inadequate standard of English;
- Resubmission of rejected manuscripts without revision;

– Paul Haddad, Editor, *Journal of Chromatography A*



...and my own publishing advice is as follows:

- Submit to the right journal;
 - scope and prestige;
- Submit to one journal only;
- Do not submit “sembarang” articles;
- Pay attention to journal requirements;
- Pay attention to structure;
- Check the English;
- Pay attention to ethics standards



Why do scientists publish?

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What is *your personal reason* for publishing?



However, editors, reviewers, and the research community **DO NOT** care about these reasons.



Why do scientists publish?

- Scientists publish to share with the science COMMUNITY something that advances (i.e not repeats) knowledge and understanding in a certain field.
 - *RULES OF THREE*
 - **Scope:** recent advances in relevant topics, or close to given tracks;
 - **Too preliminary:** thorough an extensive study, conclusions supported by data presented;
 - **Novelty:** must represent a novel approach;
- Failure to meet any one of these criteria leads to immediate rejection



Your paper is worthless if no one reads, uses, or cites it

A research study is meaningful **only** if...

- it is clearly described, so
- someone else can use it in his/her studies
- it arouses other scientists' interest and
- allows others to reproduce the results.

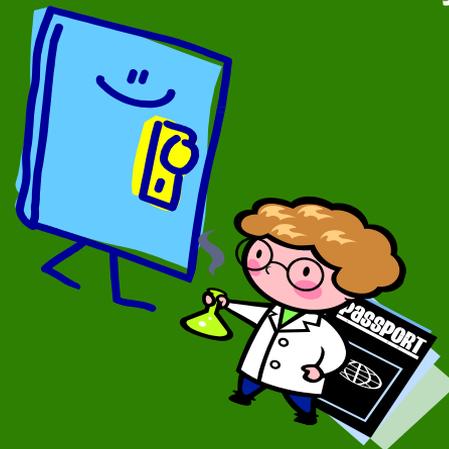
By submitting a manuscript you are basically trying to sell your work to your community...



A journal is the gateway to a COMMUNITY

- Journals are a core part of the process of scholarly communication, and are an integral part of scientific research itself.
- Journal Editors + Reviewers + Authors + Readers → A community of scientists

You paper is your passport
to your community





When you submit a paper, you ask a group of people to invest in you.

- Editors and reviewers invest time in considering, revising, and editing your paper;
- Researchers invest time in exploring your ideas and findings;
- Publishers invest time and resources producing, printing, and distributing your paper all over the world!
- You are not supposed to create “garbage”:
 - Reports of no scientific interest;
 - Work out of date;
 - Duplications of previously published work;
 - Incorrect/unacceptable conclusions;
 - “Salami” papers: datasets too small to be meaningful



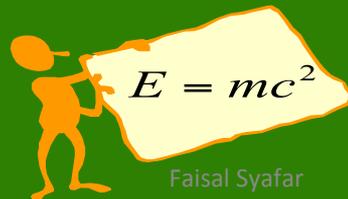
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- **What is a good manuscript?**
- How to write a good manuscript;
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Makes readers (especially reviewers and editors)

grasp the *scientific significance* as EASILY as possible.

- Content is essential
 - Contains a scientific message that is clear, useful, and exciting
- Presentation is critical
 - Conveys the authors' thoughts in a logical manner such that the reader arrives at the same conclusions as the author;
 - Constructed in the format that best showcases the authors' material, and written in a style that transmits the message clearly





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How to write a good manuscript

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1. Think about WHY you want to publish your work

Check the originality of the idea at the very beginning of your research.

- Have you REALLY done something new and interesting?
- Is there anything challenging in your work?
- Is the work directly related to a current hot topic?
- Have you provided solutions to any difficult problems?

If all answers are “yes”, then start preparing your manuscript

It is necessary to TRACK the latest results regularly in your field. Something relevant may have been published in the many months your experiment took. You can easily do this by online searching.

Scopus: 356 Web (15,108) Patents (81) SelectedSources (17) Search your library

Your query: (TITLE-ABS-KEY(mcmc) AND TITLE-ABS-KEY(parameter estimation))

[Save as Alert](#)  [RSS](#)

Refine Results

Source Title	Author Name	Year	Document Type
<input type="checkbox"/> ICASSP IEEE International Conference on Acoustics Speech and Signal Processing Proceedings (24)	<input type="checkbox"/> Doucet, A. (13)	<input type="checkbox"/> 2007 (33)	<input type="checkbox"/> Article (342)
<input type="checkbox"/> Computational Statistics and Data Analysis (16)	<input type="checkbox"/> Andrieu, C. (10)	<input type="checkbox"/> 2006 (71)	<input type="checkbox"/> Review (14)
<input type="checkbox"/> Statistics in Medicine (9)	<input type="checkbox"/> Godsill, S.J. (9)	<input type="checkbox"/> 2005 (59)	
More...	More...	More...	

Results: 356 Search within results

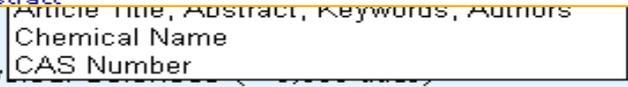
“Save as Alert”: Remind yourself about the new findings.

Document (sort by relevance)	Author(s)	Date	Source	Title
1. <input type="checkbox"/> A two-state regime switching autoregressive model with an application to river flow analysis	Vasas, K. , Elek, P. , Márkus, L.	2007	Journal of Statistical Planning and Inference	137 (10), pp.

[Abstract + Refs](#) [View at Publisher](#) [Full Text](#) Show Abstract

12/7/18 **Subject Areas** 

Life Sciences (> 3,400 titles)

Faisal Svafar Phy 

Article title, Abstract, Keywords, Authors
Chemical Name
CAS Number



2. Decide on the type of your manuscript

- Full articles / Original articles
 - the most important papers; often substantial **completed** pieces of research that are of significance.
- Letters / Rapid Communications / Short Communications
 - usually published for the **quick and early** communication of significant and original advances; **much shorter** than full articles (usually strictly limited).
- Review papers / Perspectives
 - **summarize** recent developments **on a specific topic**; highlight important points that have been **previously reported** and introduce no new information; often submitted **on invitation**.



2. Decide on the type of your manuscript.....(contd.)

- Self-evaluate your work:
 - Is it sufficient for a full article?
 - Are your results so thrilling that they need to be shown as soon as possible?
- Ask your supervisor and colleagues for advice on the manuscript type.
Sometimes outsiders see things more clearly than you.



3. Identify the potential audience for your paper

- Identify the sector of readership/community for which a paper is meant;
- Identify the interest of your audience;
 - “Privatization of Vocational and Training” in *Education Industry*?
- Is your paper of local or international interest?
 - “A bioequivalence study of malaria tablets marketed in tropical country”

4. Choose the right journal

- Investigate all candidate journals to find out
 - Aims and scope
 - Accepted types of articles
 - Readership
 - Current hot topics
 - go through the abstracts (of recent publications)

Volume 54, Issue 2, Pages 193-318 (August 2007)

Article List Full Abstracts

Display Selected Articles E-mail Articles Export Citations

- Editorial Board**
Page IFC
PDF (582 k)
- SummaryPlus | functional characterization of rec**
Chandra Panchal and Madhulika B. Gupta
12/7/07
SummaryPlus | Full Text + Links | PDF (397 k)

European Journal of Pharmaceutics and Biopharmaceutics – Elsevier

http://www.elsevier.com/wps/find/journaldescription.cws_home/600120/description

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European Journal of Pharmaceutics and Biopharmaceutics

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EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS

Official Journal of the [International Association for Pharmaceutical Technology](#)

Editor-in-Chief:
R. Gurny
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• [Tables of Contents, Abstracts and Full Text](#)

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Description

The *European Journal of Pharmaceutics and Biopharmaceutics* provides a medium for publication of novel and innovative research from the areas of Pharmaceutical Technology, Pharmaceutical Biotechnology and Biopharmaceutics.

Topics covered include:

- Drug and pro-drug design, drug stability and drug development
- Development, formulation and manufacturing of pharmaceuticals and biopharmaceuticals
- Physical pharmacy, drug delivery systems, controlled release systems and drug targeting
- Biopharmaceutics, pharmacodynamics and pharmacokinetics
- Pharmaceutical analysis and pharmaceutical packaging
- Quality control, GMP and regulatory aspects
- Medical devices

Bibliographic & ordering Information
ISSN: 0939-6411
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4. Choose the right journal.....(contd.)

- **You must get help from your supervisor or colleagues**
The supervisor (who is sometimes the corresponding author) has at least co-responsibility for your work. You are encouraged to chase your supervisor if necessary.
- **Articles in your references** will likely lead you to the right journal.
- **DO NOT gamble by scattering your manuscript to many journals. Only submit once!** International ethics standards prohibit multiple/ simultaneous submissions, and editors **DO** find out ! (Trust us, we **DO** !)



5. One more thing before typing:

Read the 'Guide for Authors' of the target journal! Again and again!

Apply the Guide for Authors to your manuscript, **even to the first draft** (text layout, paper citation, nomenclature, figures and table, etc.). It will save your time, and the editor's.

The screenshot shows the Emerald Publishing website for the Journal of Applied Research in Higher Education Information. The page includes a navigation menu, a search bar, and a main content area with the journal's logo, ISSN (2050-7003), and a 'Publish open access in this journal' button. It also features logos for Clarivate Analytics, Scopus, and HETL Higher Education Teaching & Learning. A section titled 'Winners of the 2017 Emerald/HETL Educational Outstanding Doctoral Research Awards announced!' is visible, along with a 'Read the Editor Interview with Patrik Blessinger here.' link. The page footer includes a 'Testimonial' section and a signature for Faisal Syatar.



How to write a good manuscript

- Preparations before starting
- **Construction of an article**
- Some technical details that need special attention
- Language



The general structure of a full article

Make them easy for indexing and searching!
(informative, attractive, effective)

Journal space is precious. Make your article as brief as possible. If clarity can be achieved in n words, never use $n+1$.



Writing order

- The progression of the thematic scope of a paper within these sections typically follows a general pattern: general → particular → general
- Each section has a definite purpose.
- We often write in the following order:
 - Figures and tables
 - Methods, Results and Discussion
 - Conclusions and Introduction
 - Abstract and title
 - For example, if the discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the introduction?



1. TITLE

What is the paper broadly about?

- Your opportunity to **attract the reader's attention**. Remember: readers are the potential authors who will cite your article
- Reviewers will **check whether the title is specific and whether it reflects the content of the manuscript**. Editors hate titles that make no sense or fail to represent the subject matter adequately;
- So, keep it **informative and concise**;
- **Avoid technical jargon** and abbreviations if possible. You wish to have a readership as large as possible, right?
- **Discuss with your co-authors.**



2. ABSTRACT

Tell the readers what you did and what were the important findings

- This is the **advertisement of your article**. Make it interesting, and easy to be understood without reading the whole article (Avoid using jargon and uncommon abbreviations if possible.)
- You must be **accurate**! Use words which reflect the precise meaning
- A **clear abstract** will strongly influence whether or not your work is further considered;
- Keep it as **BRIEF** as possible!!!
- No comparisons;



3. KEYWORDS

Mainly used for indexing and searching

- It is the **label of your manuscript**.
 - Avoid words with a broad meaning, but do neither use too narrow terms (get into the Google groove...)
- **Only abbreviations firmly established** in the field are eligible
 - e.g. XML, TVET
- **Check the Guide for Authors!**
 - Number, label, definition, thesaurus, range, and other special requests



4. INTRODUCTION

to convince readers that you clearly know why your work is useful

- **What is the problem?** Are there any existing solutions? What is its main limitation? And what do you hope to achieve?
- Editors like to see that you have provided a **perspective consistent with nature of the journal**. You need to introduce the main scientific publications on which your work is based. (Cite a couple of original and important works, including recent review articles)
- However, they **hate improper citations of too many references irrelevant to the work**, or inappropriate judgments on your own achievements. They will think that you have no sense of purpose at all!



Watch out for the following:

- **Never use more words than necessary.** Never make this section into a history lesson. Long introductions put readers off. Introductions of Letters are even shorter.
- We all know that you are keen to present your new data. But **do not forget that you need to give the whole picture at first.**
- **Do not mix introduction with results, discussion, and conclusion.** Always keep them separate to ensure that the manuscript flows logically from one section to the next.
- Expressions such as “novel”, “first time”, “first ever”, “paradigm-changing” are not preferred. Use them sparingly.



5. METHODS

How was the problem studied

- **Include detailed information**, so that a knowledgeable reader can reproduce the experiment.
- However, use references and Supporting Materials to indicate the previously published procedures. **Do not repeat the details of established methods**. Broad summaries are sufficient.
- Reviewers will criticize incomplete or incorrect descriptions (and may recommend rejection).



6. RESULTS

What have you found?

- Only **representative results should be presented**. The results should be essential for discussion. Use Supporting Materials freely for data of secondary importance.
- **Do not attempt to “hide” data** in the hope of saving it for a later paper. You may lose evidence to reinforce your conclusion.
- **Use sub-headings to keep results of the same type together** – easier to review and read. Number these sub-sections for the convenience of internal cross-referencing. Decide on a logical order of the data that tells a clear and easy to understand story.



6. RESULTS

What have you found? (cont'd)

- Generally, **tables** give the actual experimental results.
- **Graphs** are often used for **comparison of experimental results with those of previous works**, or with calculated/theoretical values.
- No illustrations should duplicate the information described elsewhere in the manuscript.
- Illustrations should be used for **ESSENTIAL** data only.
- The **legend of a figure should be brief**. And it should contain sufficient explanatory details to make the figure understood easily without referring to the text.



Appearance counts !

- **Un-crowded plots:** 3 or 4 data sets per figure; well-selected scales; appropriate axis label size; symbols clear to see and data sets easy to discriminate.
- Each **photograph must have a scale marker** of professional quality on one corner.
- **Use color ONLY when necessary.** If different line styles can clarify the meaning, never use colors or other thrilling effects.
- **Color needs to be visible and distinguishable** when printed out in black & white.
- **Do not include long boring tables !** (e.g., chemical compositions of emulsion systems).



7. DISCUSSION

What the results mean

- It is **the most important section of your article**. Here you get the chance to **SELL** your data!
 - A huge numbers of manuscripts are rejected because the Discussion is weak
- Make the **Discussion corresponding to the Results**.
 - But do not reiterate the results
- You need to **compare the published results with yours**.
 - DO NOT ignore work in disagreement with yours – confront it and convince the reader that you are correct or better



Watch out for the following:

- **Statements that go beyond** what the results can support
- **Unspecific expressions:** “higher temperature”, “at a lower rate”.
- **Quantitative descriptions** are always preferred.
- **Sudden introduction of new terms** or ideas
- **Speculations** on possible interpretations are allowed. But these should be rooted in fact, rather than imagination.
- **Check** the organization, number and quality of illustrations, the logic and the justifications.

Revision of Results and Discussion is not just paper work. You may do further experiments, derivations, or simulations. Sometimes you cannot clarify your idea in words because some critical items have not been studied substantially.



8. CONCLUSIONS

How the work advances the field from the present state of knowledge

- Without a clear conclusion section reviewers and readers will find it difficult to judge the work, and whether or not it merits publication in the journal.
- DON'T REPEAT THE ABSTRACT, or just list experimental results. Trivial statements of your results are unacceptable in this section.
- You should provide a **clear scientific justification for your work** in this section, and **indicate uses and extensions** if appropriate. Moreover, you can **suggest future experiments** and point out those that are underway.



9. REFERENCES

- Typically, there are more mistakes in the references than any other part of the manuscript.
- It is one of the most annoying problems, and causes great headaches among editors...
 - Cite the **main scientific publications** on which your work is based
 - Do not over-inflate the manuscript with **too many references** – it doesn't make it a better manuscript! (10-15 items recommended);
 - Avoid **excessive self-citations**
 - Avoid excessive citations of **publications from the same region**
 - Check correspondence** between text and reference list;



Author versus Journal Impact Factors

Journal Impact Factors do not reflect the “impact” of an individual author’s research articles

- Relative contributions of author and co-authors
- Well-cited articles in low-IF journals, and poorly-cited articles in high-IF journals
 - Also *Nature* ($IF_{2006} = 26.681$) has 15-20% zero-cited articles
- Reviews journals
- Review articles inflate a journal’s Impact Factor
- “Non-source items”
- Editorial policies of journals



10. COVER LETTER

Your chance to speak to the Editor directly

- Do not summarize your manuscript, or repeat the abstract, but mention **what makes it special to the journal**.
- **Mention special requirements**, e.g. if you do not wish your manuscript to be reviewed by certain reviewers.
- Many editors won't reject a manuscript only because the cover letter is bad. However, **a good cover letter may accelerate the editorial process** of your paper.
- **View it as a letter in a job application:** remember, you want to “sell” your work...



Remember !!!

- **Title** – informative, concise, attractive;
- **Abstract** – accurate, clear, brief, no comparisons;
- **Keywords** – label of the manuscript;
- **Introduction** – define briefly the problem;
- **Methods** – detailed information, organized;
- **Results**
 - Tables = experimental results;
 - Graphs = comparison experimental data/ other data;
 - Illustrations shouldn't duplicate information;
- **Discussion** – corresponding to the results; compare published results/ yours;
- **Conclusions** – simple, scientific results; uses; future directions
- **References** – main publications; check correspondence;
- **Cover letter** – what makes is special;



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Technical details

- Length of the manuscript
- Supporting material
- Text layout
- Abbreviations



Suggest potential reviewers

- Your suggestions will help the Editor to pass your manuscript to the review stage more efficiently.
- You can easily find potential reviewers and their contact details by mentioning authors from articles in your specific subject area (e.g., your references).
- The reviewers should represent at least two regions of the world. And they should not be your supervisor or close friends.
- Generally you are requested to provide 3-6 potential reviewers.



Author names: common problems

Keep consistent in the style of writing your full name and the abbreviation for all your publications – for the efficiency of indexing and searching.

Include your complete name and affiliation;



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KISS: Keep It Simple and Succinct (or Stupid...?)

➤ Clarity:

"Everything should be made as simple as possible, but not simpler" (Einstein)

➤ Objectivity

Philosophy of scientific method - avoid personal pronouns

➤ Accuracy

– Avoid imprecise language (nowadays - currently)

➤ Brevity

– Write briefly and to the point using active voice and short sentences



Grammar, spelling, etc.

- You are encouraged to have an **English expert** proof reading your manuscript. At least you should make use of the spelling and grammar checking tool of your word processor.
- **Limit the use of unfamiliar words** or phrases. Do not just rely on electronic dictionaries or translating software, which may bring out ridiculous results (often Chinglish...). You should understand the meaning of every single word you type in the manuscript.
- **US or UK spelling** should be used consistently throughout a paper
- Editor sometime offers **language editing service** for excellent manuscripts



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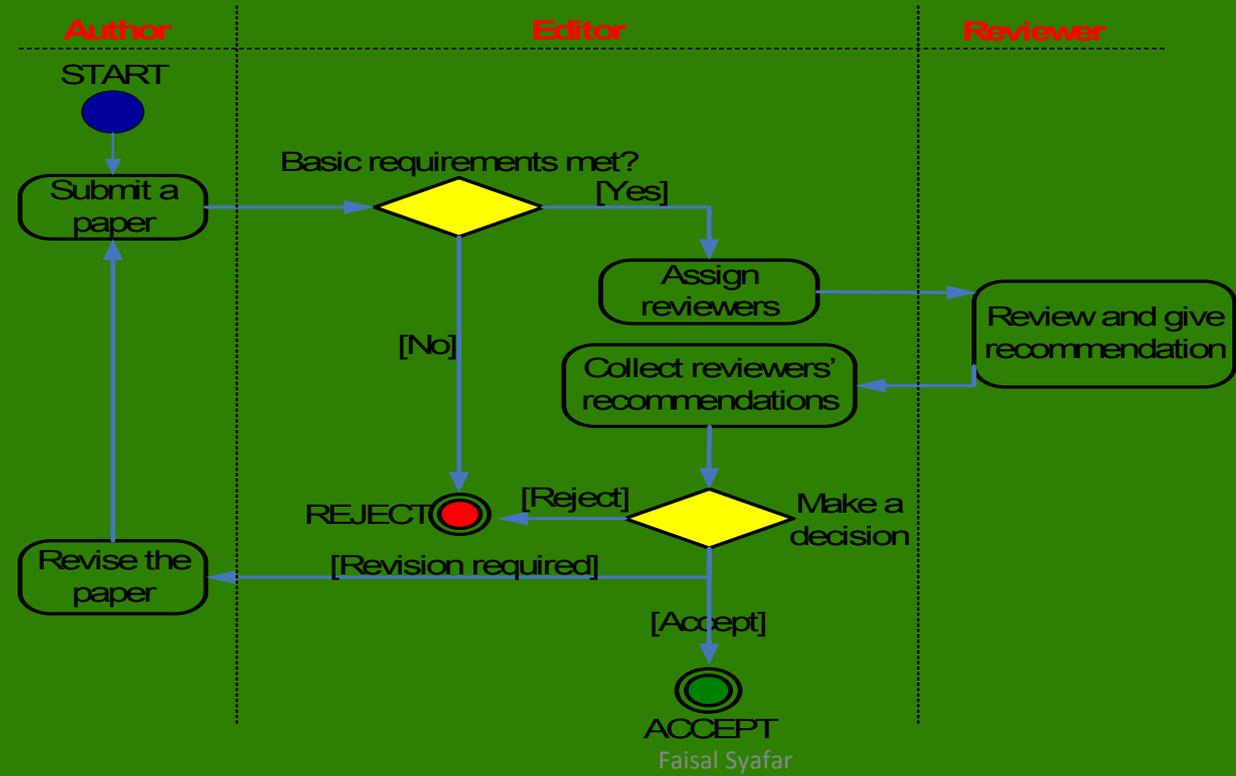
Why revision is important and necessary?

- Which procedure do you prefer?
 - Send out a sloppily prepared manuscript → get rejected after 4-6 months → send out again only a few days later → get rejected again... → sink into despair
 - Take 3-4 months to prepare the manuscript → get the first decision after 4 months → revise carefully within time limitation...accepted

Please cherish your own achievements!



Who moved your manuscript?





Initial Editorial Review

Many journals adopt the system of initial editorial review. Editors may reject a manuscript without sending it for review

Why?

- The peer-review system is **grossly overloaded** and editors wish to use reviewers only for those papers with a good probability of acceptance.
- It is a **disservice** to ask reviewers to spend time on work that has clearly evident deficiencies.



Immediate Rejection

To avoid early rejection, please make every attempt to make the manuscript as good as possible.

- No one gets it right at the first time!
 - Write, write, and re-write
- Suggestions:
 - Take several days of rest. Refresh your brain with different things. Come back with a critical view.
 - Ask your colleagues and supervisor to review your manuscript first.



Revision before submission – *checklist*

Reasons for early rejection: **content (aims and scope)**

- Paper is **of limited interest** /covers local issues only (sample type, geography, specific product, etc.).
- Paper is a **routine application of well-known methods**
- Paper presents an incremental advance or is **limited in scope**
- **Novelty and significance are not immediately evident** or sufficiently well-justified

What should you check?

- Does your work have **any interest for an international audience**? Is it necessary to let the international readers know the results?
- Have you added **any significant values to an exist method** or explored remarkable extensions of its application?
- Did you provide a **perspective consistent with the nature of journal**? Are the right conclusions drawn from the results?
- Does your work **add to the existing body of knowledge**? – Just because it has not been done before is no justification for doing it now. And just because you have done the study does not mean that is very **important!**



Revision before submission – *checklist*

Reasons for early rejection: **Preparation**

- Failure to meet submission requirements
- Incomplete coverage of literature
- Unacceptably poor English

What should you check?

- **Read the Guide for Authors** again! Check your manuscript point by point. Make sure every aspect of the manuscript is in accordance with the guidelines. (Word count, layout of the text and illustrations, format of the references and in-text citations, etc.)
- Are there **too many self-citations**, or references that are difficult for the international reader to access?
- Did the first readers of your manuscript easily grasp the essence? **Correct all the grammatical and spelling mistakes.**



Revision after submission

Carefully study the comments and prepare a detailed letter of response



Consider reviewing a procedure that peers discuss your work

- Nearly every article requires revision.
- Bear in mind that editors and reviewers **mean to help** you improve your article
 - Do not take offence.
- Minor revision **does NOT guarantee** acceptance after revision.
 - Do not count on acceptance before you carefully study the comments
- Revise the **whole** manuscript
 - not just the parts the reviewers point out



A further review of the revised manuscript is common

- Cut and paste **each** comment by the reviewer. Answer it directly below. Do not miss any point. State **specifically** what changes (if any) you have made to the manuscript. Identify the page and line number. *A typical problem – Discussion is provided but it is not clear what changes have been made.*
- Provide a **scientific response** to the comment you accept; or a **convincing, solid and polite rebuttal** to the point you think the reviewer is wrong.
- Write in a way that your responses can be given to the reviewer.



**Be very self-critical when you submit a paper
rejected after review!**



Everyone has papers rejected

do not take rejection personally



- Try to understand why the paper was rejected.
- Note that you have received the benefit of the editors and reviewers' time; take their advice serious!
- Re-evaluate your work and decide whether it is appropriate to submit the paper elsewhere.
- If so, begin as if you are going to write a new article. Read the Guide for Authors of the new journal, again and again.



Publication is not a lottery

Never treat publication as a lottery by resubmitting a rejected manuscript directly to another journal without any significant revision!!!

- The original reviewers (even editors) may eventually find it, which can lead to animosity towards the author.
- A suggested strategy
 - In your **cover letter**, declare that the paper was rejected and name the journal.
 - **Include** the referees' reports and **a detailed letter of response**, showing how each comment has been addressed.
 - **Explain why** you are resubmitting the paper to this journal, e.g., this journal is a more appropriate journal; the manuscript has been improved as a result of its previous review; etc.



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Publish AND Perish! – if you break ethical rules

- International scientific ethics have evolved over centuries and are commonly held throughout the world.
- Scientific ethics are not considered to have national variants or characteristics – there is a *single ethical standard* for science.
- Ethics problems with scientific articles are on the rise *globally*.





doi:10.1016/j.sigpro.2005.07.019 Cite or Link Using DOI

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RETRACTED Matching pursuit-based approach



Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publisher of *Signal Processing*. For more information, please visit <http://www.elsevier.com/locate/withdrawalpolicy>.

Reason: This article is virtually identical to the previously published article "A matching pursuit-based approach for SNR improvement in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, when the input SNR (SNR_{in}) is lower than 0dB (the level of echoes) and the microstructures is above the level of the echoes."

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the echoes arising from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, when the input SNR (SNR_{in}) is lower than 0dB (the level of echoes) and the microstructures is above the level of the echoes.

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $x[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let H be a Hilbert

space. We define the over-complete dictionary as a family $D = \{g_i; i=0, 1, \dots, L\}$ of vectors in H , such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analysed signal $x[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, where l^1 norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear nature of the algorithm leads to compact and sparse l^1 mode.

In each step of the iterative procedure, vector $g_i[n]$ which gives the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the w th iteration the residual is

$$r^w[n] = \begin{cases} x[n] & w=0, \\ x[n] - \sum_{i=0}^{w-1} \alpha_{i,w} g_i[n], & w \neq 0, \end{cases} \quad (1)$$

where $\alpha_{i,w}$ is the weight associated to optimum atom $g_{i,w}[n]$ at the w th iteration.

The weight α_i^w associated to each atom $g_i[n] \in D$ at the w th iteration is introduced to compute all the inner products with the residual $r^w[n]$:

$$\alpha_i^w = \frac{\langle r^w[n], g_i[n] \rangle}{\langle g_i[n], g_i[n] \rangle} = \frac{\langle r^w[n], g_i[n] \rangle}{\|g_i[n]\|^2} = \langle r^w[n], g_i[n] \rangle. \quad (2)$$

The optimum atom $g_{i,w}[n]$ (and its weight $\alpha_{i,w}$) at the w th iteration are obtained as follows:

$$g_{i,w}[n] = \underset{g_i[n] \in D}{\operatorname{argmin}} \|\langle r^w[n], g_i[n] \rangle\|^2 = \underset{g_i[n] \in D}{\operatorname{argmax}} |\langle r^w[n], g_i[n] \rangle|. \quad (3)$$

The computation of correlations $\langle r^w[n], g_i[n] \rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{w+1}[n], g_i[n] \rangle = \langle r^w[n], g_i[n] \rangle - \alpha_{i,w} \langle g_{i,w}[n], g_i[n] \rangle. \quad (4)$$

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RETRACTED: Matching pursuit-based approach for ultrasonic flaw detection

N. Ruiz-Reyes, P. Vera-Gandias, J. Curpián-Alonso, J.C. Cuevas-Martínez, F. López-Ferreras

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Abstract
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New matching pursuit-based algorithm for SNR improvement in ultrasonic NDT

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Abstract

In this paper a fast and efficient matching pursuit-based algorithm is proposed for SNR improvement in ultrasonic NDT of highly scattering materials. The proposed algorithm utilizes time-shifted Morlet functions as dictionary elements because they are well matched with the ultrasonic pulse echoes obtained from the transducer used in the experiments. The proposed algorithm is fast enough to be used in the signal processing stage of real time inspection systems. Computer simulation has been performed to verify the SNR improvement for diverse ultrasonic waves embodied in high-level synthetic grain noise. This improvement is also experimentally verified using ultrasonic traces acquired from a carbon fibre reinforced plastic material. Numerical results show meaningful SNR improvements for low input SNR ratios (below 0 dB).

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Keywords: Matching pursuit; NDT; SNR; Morlet pulse; Ultrasonic

1. Introduction

Flaw detection by ultrasonic Non-Destructive Evaluation or Testing (NDE or NDT) has been proven to be an effective means to assure the quality of materials. In the analysis of back-scattered ultrasonic signals, the microstructure of the tested materials can be considered as an unresolved and randomly distributed set of reflection centres. The back-scattered ultrasonic signal is the result of convoluting the transmitted acoustic pulse with these reflection centres. This noise-like signal of structural origin (ultrasonic grain noise) is time-invariant and, unfortunately, in some cases presents a frequency band very similar to that of the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for Signal-to-Noise Ratio (SNR) enhancement in ultrasonic

possible real time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform-based denoising methods have been proposed during the last years [3–5], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit [6] is a quite recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique has been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [7] as an alternative to the wavelet transform technique, being the computational cost of the basis pursuit algorithm its main drawback.

In this paper, a novel matching pursuit-based signal processing method is proposed for SNR improvement in ultrasonic NDT of highly scattering materials, such as steel and composites. The proposed method uses matching



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Fabrication is making up data or results, and recording or reporting them.

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“It can *waste the time of others*, trying to replicate false data or designing experiments based on false premises, and can lead to therapeutic errors. It can never be tolerated.”

Professor Richard Hawkes
Department of Cell Biology and Anatomy, University of Calgary



Data fabrication and falsification

Falsification is manipulating research materials, equipment, processes; or changing / **omitting data or results such that the research is not accurately represented** in the research record.

Select data to fit a preconceived hypothesis: "...an experiment (or data from an experiment) is not included because it 'did not work', or we show '*representative*' images that do not reflect the total data set or, more egregiously, data that do not fit are simply shelved."

Richard Hawkes

"The most dangerous of all falsehoods is a **slightly** distorted truth."

G.C.Lichtenberg (1742-1799)



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- ✓ www.stm-assoc.org/storage/Scientific_Publishing_in_Transition_White_Paper.pdf
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- ✓ Ethical Guidelines for Journal Publishing, Elsevier. http://www.elsevier.com/wps/find/intro_cws_home/ethical_guidelines#Duties%20of%20Authors
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- ✓ <http://owl.english.purdue.edu/owl/>
- ✓ <http://www.physics.ohio-state.edu/~wilkins/writing/index.html>
- ✓ George D. Gopen, Judith A. Swan. The science of Scientific Writing. American Scientist (Nov-Dec 1990), Vol. 78, 550-558.
- ✓ Michael Derntl. Basics of Research Paper Writing and Publishing. <http://www.pri.univie.ac.at/~derntl/papers/meth-se.pdf>
- ✓ Thomas H Adair. Professor, Physiology & Biophysics Center of Excellence in Cardiovascular-Renal Research, University of Mississippi Medical Center. <http://dor.umc.edu/ARCHIVES/WritingandpublishingaresearcharticleAdair.ppt>
- ✓ Bruce Railsback. Professor, Department of Geology, University of Georgia. Some Comments on Ethical issues about research. www.gly.uga.edu/railsback/1111misc/ResearchEthics.html
- ✓ Peter Young. Writing and Presenting in English. The Rosetta Stone of Science. Elsevier 2006.
- ✓ Philip Campbell. Editor-in-Chief, Nature. Futures of scientific communication and outreach. June 2007.
- ✓ Yaoqi ZHOU. Recipe for a quality Scientific Paper: Fulfill Readers' and Reviewers' Expectations. <http://sparks.informatics.lupui.edu>
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